

Claims

- [1] *A drying machine comprising:
a cabinet;
a drum rotatably installed in the cabinet for containing laundry to be dried;
a first housing connected to the drum;
a second housing connected to the first housing;
first and second bearings respectively provided in the first and second housings;
and
a shaft supported by the first and second bearings, and rotatably connected to the drum.
- [2] The drying machine as set forth in claim 1, wherein the first and second bearings are connected to each other.
- [3] The drying machine as set forth in claim 1, wherein the first and second bearings are connected to each other such that they are respectively sealed.
- [4] The drying machine as set forth in claim 1, wherein one of the first and second bearings comprises ribs formed therein along its edge, and the other one of the first and second bearings comprises grooves engaged with the ribs.
- [5] The drying machine as set forth in claim 1, wherein the first housing and the first bearing are directly connected to each other without using connection members.
- [6] The drying machine as set forth in claim 1, wherein one of the first housing and the first bearing comprises at least one protrusion, and the other one of the first housing and the first bearing comprises at least one recess for mounting the at least one protrusion.
- [7] The drying machine as set forth in claim 1, wherein the shaft is fixed to the cabinet.
- [8] The drying machine as set forth in claim 1, wherein the first and second bearings are rotated together with the rotation of the drum.
- [9] The drying machine as set forth in claim 1, wherein the first and second bearings support the shaft in the radial direction and the axial direction of the shaft.
- [10] The drying machine as set forth in claim 1, wherein the first and second bearings surround the end of a journal of the shaft.
- [11] The drying machine as set forth in claim 1, wherein a journal of the shaft has a spherical shape.
- [12] The drying machine as set forth in claim 1, wherein a journal of the shaft is made

of a metal.

- [13] The drying machine as set forth in claim 11, wherein each of the first and second bearings comprises a recess for mounting the spherical journal.
- [14] The drying machine as set forth in claim 1, wherein a space for storing a grease is formed between a journal of the shaft and the first and second bearings.
- [15] The drying machine as set forth in claim 1, wherein a journal of the shaft comprises at least one oil groove formed therein along its circumference.
- [16] The drying machine as set forth in claim 1, wherein the first bearing is formed by injection molding.
- [17] The drying machine as set forth in claim 1, wherein the first bearing is made of plastic.
- [18] The drying machine as set forth in claim 1, wherein the second bearing is formed by injection molding.
- [19] The drying machine as set forth in claim 1, wherein the second bearing is made of plastic.
- [20] The drying machine as set forth in claim 1, wherein the first and second bearings are respectively formed integrally with the first and second housings.
- [21] A drying machine comprising:
 - a cabinet;
 - a drum rotatably installed in the cabinet for containing laundry to be dried;
 - a first bearing connected to the drum;
 - a second bearing connected to the first bearing; and
 - a shaft supported by the first and second bearings, and rotatably connected to the drum.
- [22] The drying machine as set forth in claim 21, wherein the first and second bearings are connected to each other such that they are respectively sealed.
- [23] The drying machine as set forth in claim 21, wherein one of the first and second bearings comprises ribs formed therein along its edge, and the other one of the first and second bearings comprises grooves engaged with the ribs.
- [24] The drying machine as set forth in claim 21, wherein the shaft is fixed to the cabinet.
- [25] The drying machine as set forth in claim 21, wherein the first and second bearings are rotated together with the rotation of the drum.
- [26] The drying machine as set forth in claim 21, wherein the first and second bearings support the shaft in the radial direction and the axial direction of the

shaft.

- [27] The drying machine as set forth in claim 21, wherein the first and second bearings surround the end of a journal of the shaft.
- [28] The drying machine as set forth in claim 21, wherein a journal of the shaft has a spherical shape.
- [29] The drying machine as set forth in claim 21, wherein a journal of the shaft is made of a metal.
- [30] The drying machine as set forth in claim 28, wherein each of the first and second bearings comprises a recess for mounting the spherical journal.
- [31] The drying machine as set forth in claim 30, wherein the recess of the first bearing is formed in a boss provided on the first bearing.
- [32] The drying machine as set forth in claim 21, wherein a space for storing a grease is formed between a journal of the shaft and the first and second bearings.
- [33] The drying machine as set forth in claim 21, wherein a journal of the shaft comprises at least one oil groove formed therein along its outer circumferential surface.
- [34] The drying machine as set forth in claim 21, wherein the first and second bearings are formed by injection molding.
- [35] The drying machine as set forth in claim 21, wherein the first and second bearings are made of plastic.
- [36] The drying machine as set forth in claim 21, wherein each of the first and second bearings comprises connection holes formed through bosses provided on the first and second bearings.
- [37] The drying machine as set forth in claim 21, wherein the internal surfaces of the first and second bearings contacting a journal of the shaft are coated with a self lubricating material.
- [38] The drying machine as set forth in claim 37, wherein the self lubricating material is a material containing Teflon.
- [39] The drying machine as set forth in claim 37, wherein the self lubricating material is a material containing carbon.
- [40] A drying machine comprising:
 - a cabinet;
 - a drum rotatably installed in the cabinet for containing laundry to be dried;
 - a shaft connected to the drum;
 - a housing unit provided on the cabinet, and surrounding the shaft; and

a bearing installed in the housing unit, and rotatably supporting the shaft.

- [41] The drying machine as set forth in claim 40, wherein the shaft comprises a flange fixed to the rear surface of the drum.
- [42] The drying machine as set forth in claim 40, wherein the housing unit comprises first and second housings connected to each other.
- [43] The drying machine as set forth in claim 42, wherein each of the first and second housings comprises a seat for mounting the bearing.
- [44] The drying machine as set forth in claim 40, wherein the housing unit is disposed at the outside of the cabinet.
- [45] The drying machine as set forth in claim 40, further comprising a bracket for fixing the housing unit to the cabinet.
- [46] The drying machine as set forth in claim 40, further comprising rings installed on the shaft for holding the bearing.
- [47] The drying machine as set forth in claim 40, further comprising an E-ring installed on the shaft for preventing the bearing from being separated from the shaft.
- [48] The drying machine as set forth in claim 40, wherein the bearing is an oilless bearing.